

ABSTRACT

The present invention provides a mask blank used for the charged particle beam exposure made by employing an SOI substrate having a silicon membrane higher reliability in quality, without the problem of deformation due to the compression stress of a silicon oxide film as an intermediate layer of the SOI substrate, and provides a method for forming a mask blank and a mask used for the charged particle beam exposure. The mask blank used for the charged particle beam exposure made by employing an SOI substrate having a front-side silicon membrane and a back-side silicon layer with a silicon oxide layer interposed therebetween is characterized in that the back-side silicon layer and the silicon oxide film of said SOI substrate are partially removed to form an opening to be an exposed region and an etching stop layer having lower stress is formed in the opening.